

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. **(Currently Amended)** A method for detaching a frozen charge from the inner wall of a grinding pipe, comprising the steps of:

- controlling a drive device of the grinding pipe to control the angle of rotation and the speed of rotation of the grinding pipe; and
- varying the speed of rotation of the grinding pipe by the drive device such that the varied rotational speed **creates detaching forces caused by inertia to act on the frozen charge, the detaching forces created by the varied rotational speed causing** ~~causes~~ the frozen charge to detach from the inner wall of the grinding pipe.

2. **(Previously Presented)** The method according to claim 1, wherein a maximum value of the angle of rotation smaller than 180° is not exceeded.

3. **(Previously Presented)** The method according to claim 1, wherein that a maximum value of the angle of rotation smaller than or equal to 90° is not exceeded.

4. **(Previously Presented)** The method according to claim 1, wherein the maximum value of the angle of rotation is dependent on the material nature of the frozen charge.

5. **(Previously Presented)** The method according to claim 1, wherein the angle of rotation is set to oscillate about a number of predetermined angles of rotation with the same arithmetic sign one after another.

6. (Previously Presented) The method according to claim 1, wherein the angle of rotation is set to oscillate about a number of predetermined angles of rotation with different arithmetic signs one after another.

7. (Previously Presented) The method according to claim 1, wherein the grinding pipe is braked abruptly at least once at a predetermined angle of rotation.

8. (Previously Presented) The method according to claim 7, wherein the grinding pipe is braked abruptly to a standstill.

9. (Previously Presented) The method according to claim 1, wherein the same motor is used for detaching the frozen charge as for rotating the grinding pipe during grinding operation.

10. (Previously Presented) The method according to claim 1, wherein the frozen charge is wetted.

11. **(Currently Amended)** A control device for the drive device of a grinding pipe **including a frozen charge therein**, the control device comprising:

means for defining an operating cycle for the grinding pipe, the operating cycle defining oscillations in the angle of rotation of the grinding pipe about at least one predetermined angle of rotation **offset in which the center of gravity of the frozen charge is deflected in relation to from a starting resting** position of the grinding pipe; and

means for controlling the drive device according to the defined operating cycle such that the drive device oscillates the angle of rotation of the grinding pipe about the least one predetermined angle of rotation.

12. (Previously Presented) The control device according to claim 11, comprising means for defining an operating cycle for the grinding pipe.

13. (Previously Presented) The control device according to claim 11, comprising a field-oriented regulating arrangement.

14. **(Currently Amended)** A system comprising:
a drive device for a grinding pipe; and
a control device configured to control the drive device of the grinding pipe for targeted detachment of a frozen charge, the control device including:

means for defining an operating cycle for the grinding pipe, the operating cycle defining oscillations in the angle of rotation of the grinding pipe about at least one predetermined angle of rotation **offset in which the center of gravity of the frozen charge is deflected in relation to from a starting resting** position of the grinding pipe; and

means for controlling the drive device according to the defined operating cycle such that the drive device oscillates the angle of rotation of the grinding pipe about the least one predetermined angle of rotation.

15. (Previously Presented) The system according to claim 14, comprising a motor which drives the grinding pipe both during grinding operation and for detaching the frozen charge.

16. (Previously Presented) The system according to claim 15, wherein the motor is coupled to a converter.

17. (Previously Presented) The system according to claim 15, wherein the motor is a ring motor.

18. Cancelled

19. (Previously Presented) The method according to claim 1, comprising:
controlling the drive device to oscillate the angle of rotation of the grinding pipe about at least one predetermined angle of rotation.

20. **(Currently Amended)** The control device according to claim 11, wherein the operating cycle defines oscillations in the angle of rotation of the grinding pipe about a particular predetermined angle of rotation such that during the oscillation about the particular predetermined angle of rotation, the grinding pipe does not rotate through the starting ~~resting~~ position of the grinding pipe.

21. **(Currently Amended)** The system according to claim 14, wherein the operating cycle defines oscillations in the angle of rotation of the grinding pipe about a particular predetermined angle of rotation such that during the oscillation about the particular predetermined angle of rotation, the grinding pipe does not rotate through the starting ~~resting~~ position of the grinding pipe.

22. **(Currently Amended)** A method for detaching a frozen charge from the inner wall of a grinding pipe, comprising the steps of:

controlling a drive device of the grinding pipe to control the angle of rotation and the speed of rotation of the grinding pipe; and

controlling the drive device to oscillate the angle of rotation of the grinding pipe about at least one predetermined angle of rotation in order to create detaching forces caused by inertia to act on the frozen charge, the detaching forces detaching ~~detach~~ the frozen charge from the inner wall of the grinding pipe.

23. **(Currently Amended)** The method according to claim 19, comprising controlling the drive device to oscillate the angle of rotation of the grinding pipe about at least one non-zero angle of rotation as measured from a starting ~~resting~~ position of the grinding pipe.

24. **(Previously Presented)** The method according to claim 19, wherein during the oscillation of the grinding pipe, a maximum angle of rotation of less than 180° is not exceeded.

25. (Previously Presented) The method according to claim 19, wherein during the oscillation of the grinding pipe, a maximum angle of rotation of less than 90° is not exceeded.

26. (Previously Presented) The method according to claim 19, further comprising:
determining a maximum angle of rotation based on a material nature of the frozen charge; and

during the oscillation of the grinding pipe, limiting the rotation of the grinding pipe to the determined maximum angle of rotation.

27. (Previously Presented) The method according to Claim 19, wherein the angle of rotation is set to oscillate about a number of different predetermined angles of rotation with the same arithmetic sign.

28. (Previously Presented) The method according to Claim 19, wherein the angle of rotation is set to oscillate about a number of different predetermined angles of rotation with different arithmetic signs.

29. (Previously Presented) The method according to Claim 19, wherein the grinding pipe is braked abruptly at least once at a predetermined angle of rotation.

30. (Previously Presented) The method according to Claim 19, wherein the same motor is used for oscillating the angle of rotation of the grinding pipe to detach the frozen charge as for rotating the grinding pipe during a grinding operation.

31. (New) The method according to Claim 11, wherein the starting position of the grinding pipe is a resting position in which the center of gravity of the frozen charge is located directly below an axis of rotation of the grinding pipe.

32. **(New)** A method for detaching a frozen charge from the inner wall of a grinding pipe, comprising the steps of:

controlling a drive device of the grinding pipe to control the angle of rotation and the speed of rotation of the grinding pipe; and

varying the speed of rotation of the grinding pipe by the drive device such that the varied rotational speed detaches the frozen charge from the inner wall of the grinding pipe.

33. **(New)** The method according to Claim 32, wherein varying the rotational speed of the grinding pipe automatically detaches the frozen charge from the inner wall of the grinding pipe.